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Oversight Hearing

Subcommittee on Energy and Resources

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House Government Reform Sub-Committee on Energy and Resources
Oversight Hearing: "Petroleum Refineries: Will Record Profits Spur Investment in New Capacity"

Synopsis

The current situation in US oil and gas can be seen in the context of a fulcrum point. The 20th Century was one in which the US economy was driven by abundant cheap domestic oil and gas. The 21st century will be driven by scarcer, more expensive, imported oil. The current priorities of US consumers and politicians are lagging the realities of the future, which are all too visible in the present energy crisis. US refining is a symptom of the problems faced, rather than a cause. Consumers and politicians are living in a past 20th Century in which the US was the largest producer of oil and gas in the world, and oil and gas were cheap enough to fuel voracious energy demand, for example in excessively heavy, over-large private vehicles, or SUVs. That cheap energy era has gone, and with a lack of coherent political policy to address US energy demand, we are in the hands of the market.

From a policy standpoint, given the future for the US is higher cost oil and gas, it would be better to address demand, which, if it could be reduced, would alleviate the problems of US refining. Instead, policy is fragmented but broadly works to encourage more supply and the continuation of cheap prices, that do not reflect the true cost of oil in terms of the wars and environmental costs that are ultimately caused. However, to repeat, policy is currently so fragmented that we are at the mercy of the market.

Will high margins generate more investment in US refining? Yes, as long as the government stays out of the way. Expect a high priced, volatile environment as the market adjust itself to the new reality. Remember that the market will attack the weak and helpless first. Economic and financial pain in the near term – this winter – should be severe. Demand and supply will likely revert to balance over time. Even if policy is rapidly addressed on the supply side, shortage of parts and labour mean nothing effective at a nationwide level can be done within 2-3 years, not least because the refining industry is already investing.

US refining & record profits

Background

It is an honor to be here to address this most august of institutions at this critical time, not only for US, but also for global, energy supply.

My name is Paul Sankey, I am the lead oil stock analyst at Deutsche Bank. My professional energy experience dates from 1990, when I joined the International Energy Agency (IEA) in Paris three weeks before Saddam Hussein invaded Kuwait. The recent emergency IEA drawdown of oil inventory to provide post-Katrina oil to the United States is the first emergency drawdown since that invasion in 1990, giving you an idea of the crisis environment we are now in.

After the IEA I moved to Edinburgh, Scotland, to be a managing consultant at Wood Mackenzie, the global oil industry advisor. My specialization was global gas and particularly liquid natural gas (LNG). Last year I addressed a Joint Economic Committee hearing on that subject.

In 2000 I became a stock analyst at Deutsche Bank (DB), and now work at 60 Wall Street, advising on equity investment in the global oil and gas industry.

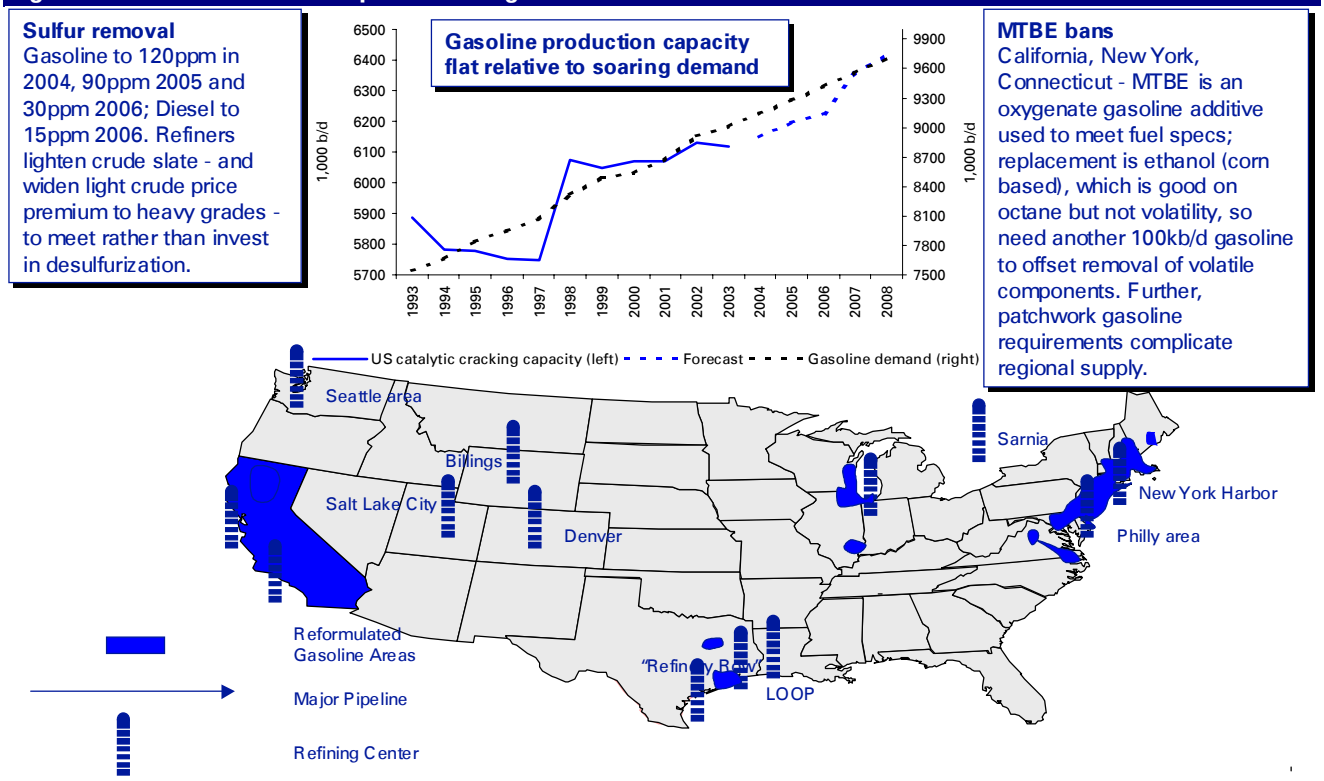
The question here today is: "Petroleum Refineries: Will Record Profits Spur Investment in New Capacity?". Given that conventional economic wisdom would provide a simple one word answer to that question, namely "Yes", it is perhaps more pertinent to first examine why we are asking such a simple question at all, and secondly add the more important and difficult to answer qualifier, namely "When and/or how will record profits spur investment?"

Will investment in new capacity be spurred?

Why are we asking? Because the latest view is that the problems of the US regarding oil stem from a lack of refining capacity. This is true on a short term basis, but the problems in US refining are symptomatic of a far bigger problem regarding the US and oil, namely that demand for cheap oil is huge, cheap oil is running out, the last barrels are heavier in grade and more sulphurous "sourer" and therefore more difficult to refine, yet US politicians have mandated ever lighter "sweeter" products with less sulphur and more complex grades. After years of excess capacity, which led to investment restraint, demand has now exceeded supply and solving the problem immediately is simply not possible. The net conclusion is that high prices and tight markets are here to stay, arguably not only for the 3-4 years it will take to add capacity, but also on a 50 and 100-year view.

US politicians only reflect the average consumer, who wants, by priority, low energy prices, from secure diverse sources, with high environmental restrictions to reduce environmental impacts that result from cheap energy.

Figure 1: US environmental requirements tighten the market



Source:

The net trailing result of that paradoxical combination has been 20 years of low energy prices because of low taxes, a need to move to less and less secure sources of supply as a result of strong demand growth, and a reduction in investment in US refining because of low margins and high regulation.

The prioritization of cheap energy supply above all has totally under-priced oil and gas in terms of its growing scarcity from secure sources and its environmental impact. The current prioritization of cheap - i.e. low tax - energy as a government priority is a function of the following::

- First, of supply side principle from Republicans and
- Second, bitter experience from Democrats, who suffered as a result of government attempts to price energy better to reflect its cost, and address the demand side of the equation. The Democrats were undone by the market in 1979/1980 which reacted sharply to extremely high prices with lower demand and sustained supply growth.

The logical and simple solution to almost all the energy problems that the United States faces is to tax oil, and particularly gasoline, to reflect better its true cost. Governments have been quick to tax smoking with a view to its cost to society, no wars have been fought over cigarettes. European and Asian governments have taxed gasoline to reflect its true cost. But in the United States, that has not been done.

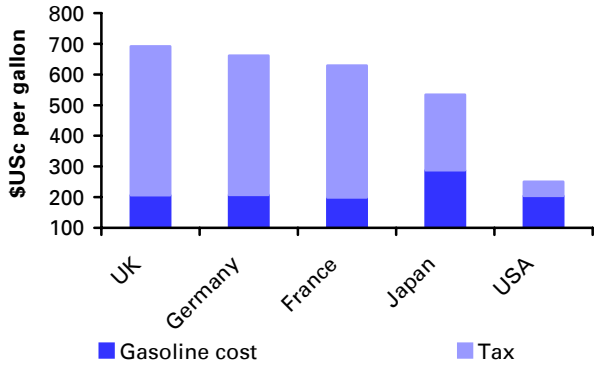
The importance of the US car industry within this equation should not be underestimated, and again the market is violently solving the paradox. SUVs have driven excessive and unproductive oil consumption to the point where they have forced oil prices higher, therefore

destroying demand for SUVs. The SUV manufacturers have had a last gasp "employee discount" giveaway of vehicles, but the sales trend is collapsing. The question now is how the government deals with the grave resultant problems of the US auto industry.

It is the various vested interests at work here that make the US political environment regarding energy so fragmented and contradictory. The most simple solution of higher gasoline tax is seen as political suicide. Any debate on energy quickly breaks into sub-interest groups arguing their corner, with the net effect that no coherent policy emerges. This essentially leaves the US energy market to its own devices.

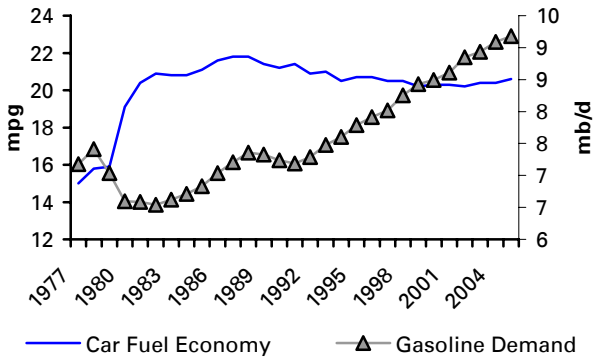
So the key backdrop here is that the net effect of political intervention has been to reduce refining investment by attempting to patch over environmental impact of the voracious use of gasoline by US consumers who have paid extremely low prices for an increasingly scarce and difficult to obtain commodity.

Figure 2: US gasoline is cheap



Source:IEA

...and so demand growth is strong and efficiency poor



Source: API

We take the view that US political consensus regarding oil is so fragmented that effectively there will not be any coherent policy outside of crisis management. With a Republican White House, the net moves made are likely to encourage supply, which effectively make the long term problems worse.

However there is an even worse idea, which is a windfall profit tax. Politicians did absolutely nothing to help the US refining industry when it was almost bankrupt, as recently as 2002, and yet are now formulating taxes that will directly serve to under-mine investment in US refining going forward. Our strong view is that if government intervention is really necessary, it should be to address the demand side (gently), rather than further complicate the supply side of the equation.

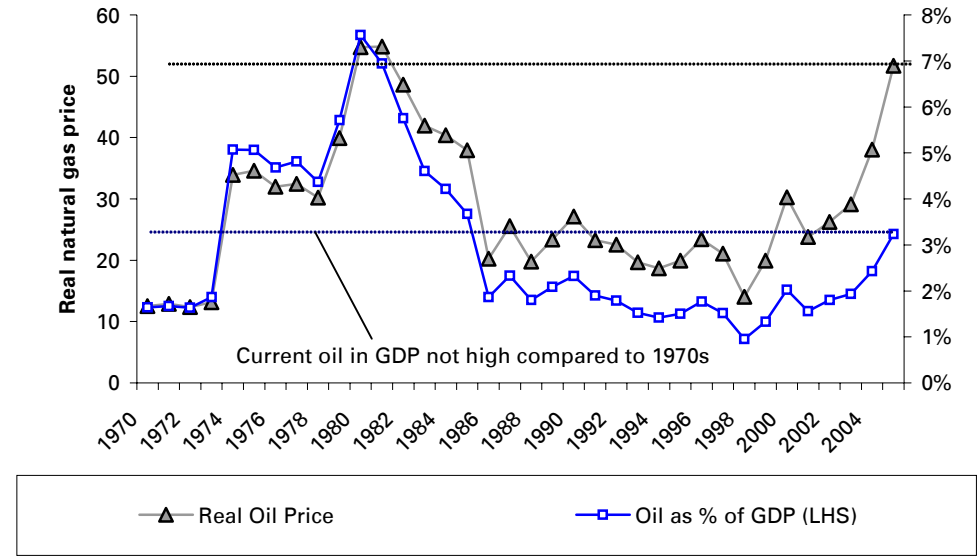
On balance, we think that given fragmentation and vested interest, the free market will work out the problems of US oil and gas, and by extension refining. The simple fact is that it is too late for coherent intervention, and the market is now on top of the situation. A free market might be seen as a positive, and relative to a government-managed market it most likely is. However it should be kept in mind that the market will solve problems with brutal efficiency at times, it will take the weak, helpless and poor first, and that is essentially the current environment in which we find ourselves.

Refining is not really the issue, oil supply and demand is…

Refining in the US may be tight on a short-term basis, but as recently as 2002 US refining was in over-capacity. In fact US refining tightness is a symptom rather than a cause, and should be considered in terms of the long term energy cycle which commenced in the modern era in the 1970s.

If we examine the current situation in terms of a 30 year cycle, and in terms of the economic impact of high oil prices and nervous geopolitics on US energy supply and demand, we can see that although current prices in real terms are approaching the levels seen during the energy crises of the 1970s, in fact oil as a percentage of GDP remains at a relatively far lower level that it was then. Current gasoline prices give US citizens "sticker shock" but do not have the same impact on their pocket book, or their behavior, as the price of the 1970s did. Therefore we find that US gasoline consumption is much more robust in the face of high prices now than it was back then.

Figure 3: Oil in GDP

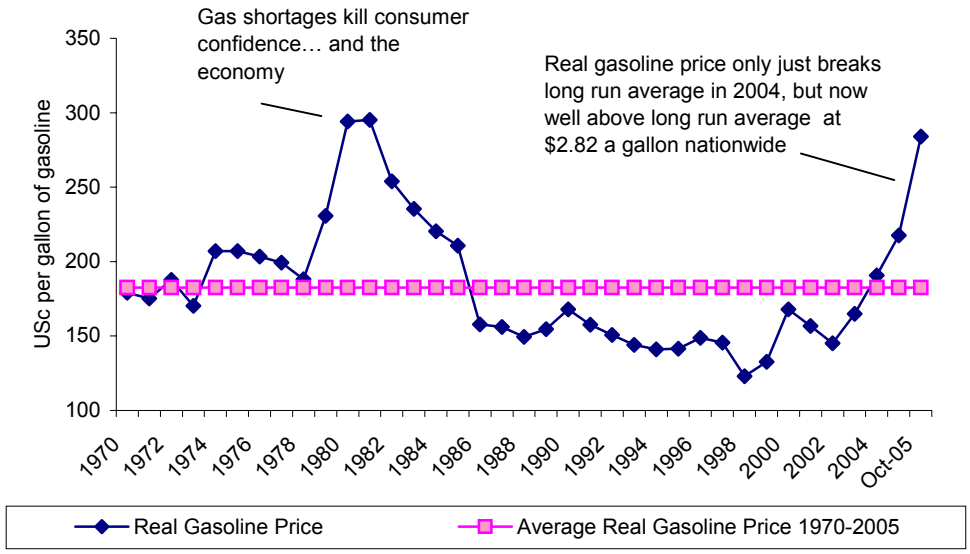


Source: DB, EIA, BLS

This has confounded predictions that oil demand would start falling as prices rose above $30 a barrel, as it did back then. Not only do consumer now spend relatively less on oil, but their consumption of it is now more or less only for staple use, transport (and heat). This is because the easy substitution of oil, for example in power generation, was undertaken in the 1970s and 1980s, and reduced economic dependence on oil. It also reduced oil use to its most staple un-substitutable use: in the internal combustion engine for use in transport. The net effect is we are less affected by high oil prices now, and the money we spend on oil is for a staple use, that of transport. Marginal choice of vehicle may change towards more efficient cars, in fact we think this will be a 21st century mega-trend that may solve our problems, but oil, specifically gasoline, will remain a staple requirement of life, and the US

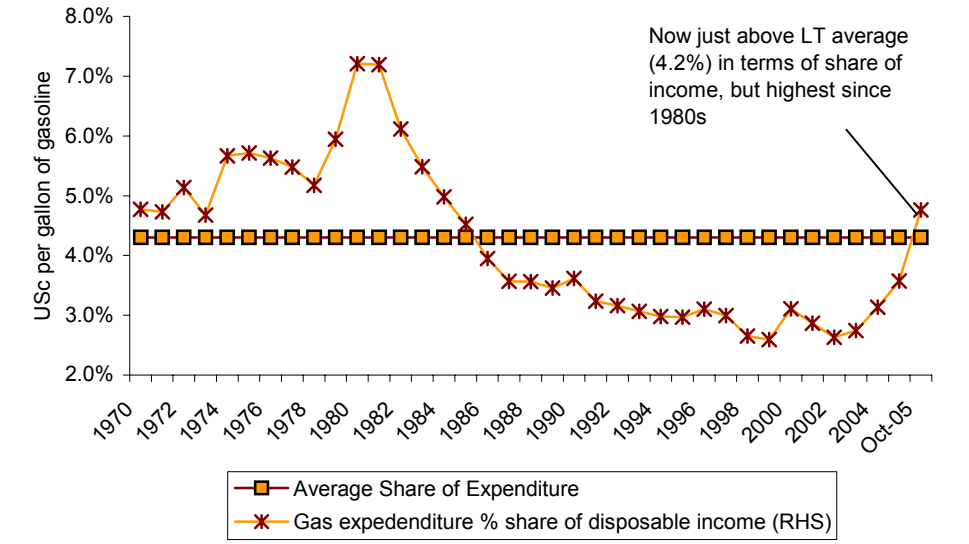
consumer will likely cut discretionary spending elsewhere, before abandoning their car, quite simply because they have no choice but to drive.

Figure 4: Gasoline prices in long term context



Source: API

Figure 5: But not so punitive in terms of average income



Source: API

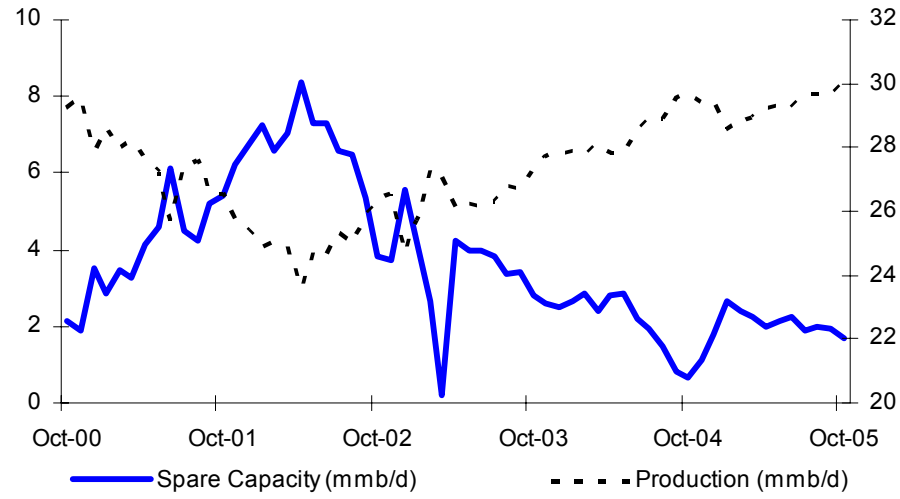
So demand has surpassed expectations, with the US economy accelerating its growth earlier this year in a $50/bbl oil environment. It has taken a move to a $65 environment to impact demand, and we at Deutsche Bank think that US demand still may be surprising with its strength, with data heavily distorted by hurricanes making certainty impossible. We believe that high oil prices will negatively affect poorer consumers, but that the current situation is manageable based on the long term view of how onerous current prices are against income. The concern is that prices may well move higher.

That leads us to the answer to the question "Why are we questioning whether high profits will cause refining investment?" Because elasticities are not working as they have previously. We, and the US refining industry, have been surprised by the strength of supply and the weakness of demand. The US oil industry has been caught scrambling.

We have highlighted that the economy is less dependent on oil and its use is now staple, which explains the demand part of the equation. However the supply side is less well understood. The simple fact is that in this latest cycle, the supply and demand reaction that was expected from $30+ oil has not happened at all to the extent expected, keeping in mind for example that OPEC had previously set a price band (in 1999) of $20-$30 oil. The reason for the *upper* limit was that higher than $30 oil was seen as likely to encourage supply and discourage demand.

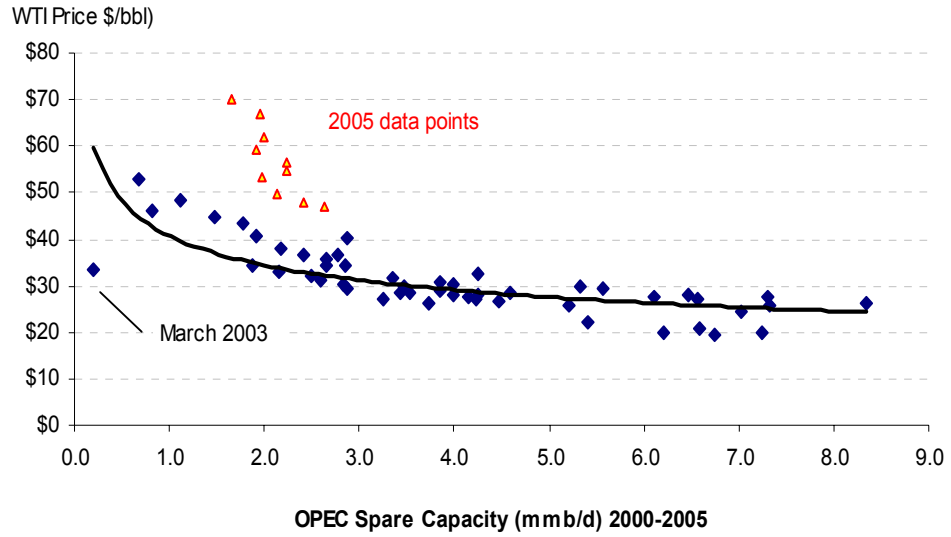
Why has supply not reacted? First, in greenfield oil exploration terms, there is no correlation between major exploration success and high prices. The major finds of Non-OPEC oil were in the late 1960s and early 1970s at low prices, and again in the late-1990s in the deepwater, again at low prices. Basically finding a major oil field is always profitable, and companies will always attempt to do it. Now, oil companies are quite clear that they would not do more exploration more at $50 oil than they would at $20, because of a lack of prospects in accessible places. They are doing everything they can and price makes no difference.

Figure 6: OPEC spare capacity falls .....



Source: OPEC, Bloomberg, DOE

Figure 7: ...which drives a nervous market still higher, but demand keeps coming

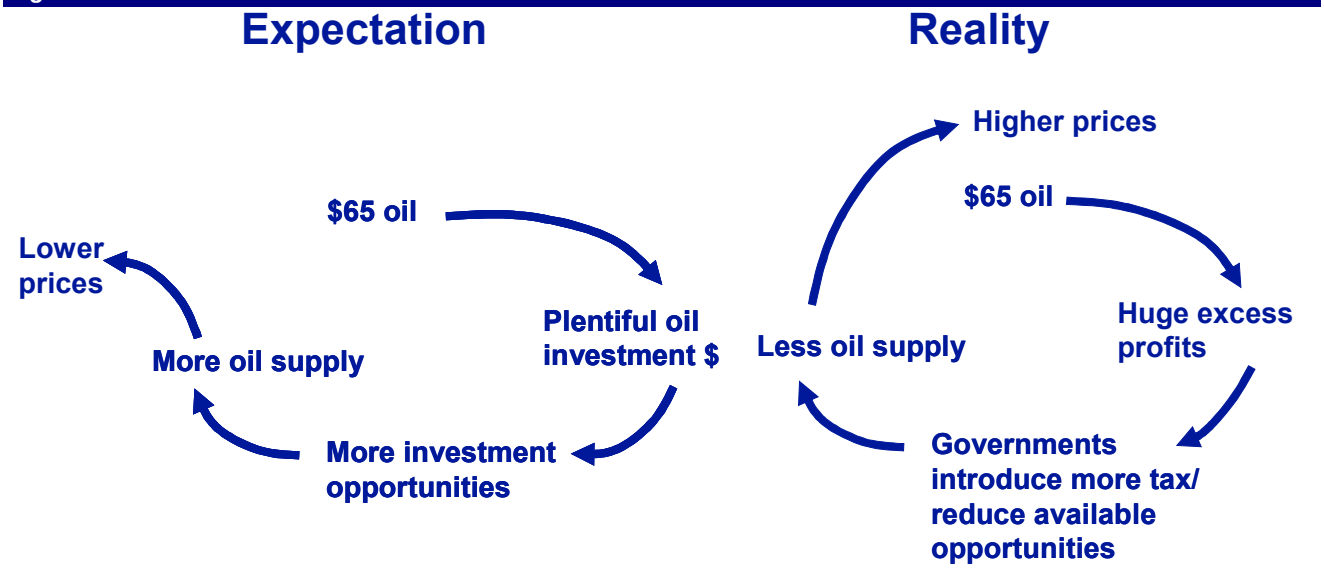


Source: OPEC, Bloomberg, DOE

Basically, demand growth for oil has long since out-stripped available domestic supply and effectively left the remaining resource in less friendly places, either in geological, geographical or geopolitical terms. The effect of not taxing US gasoline has been that now American consumers pay a direct tax not to their own treasury but rather to non-democratic governments with fundamentally different belief systems from the US, leading to a paradoxical need to engage these nations as allies. Every American is tragically aware of how dreadfully that complex and paradoxical engagement can end.

Even then, consumers may not realize how serious the situation is. Oil and gas is now imported from more-or-less hostile countries, many of whom have been offended by US foreign policy over the past 50 years. Again, the politicians tend towards the prioritization of cheap energy over more long term solutions. And again, because of the fragmentation of political policy into vested interest, there are multiple foreign policy paradoxes and problems caused by oil: for example a democratically elected Christian president of a neighboring country with vast oil and gas reserves is treated as an enemy of the USA. A distant non-democratic aggressively non-Christian country with a poor human rights record is accorded the status of primary ally. Both provide major imports. To further illustrate, regarding the first example, I suggested to policy makers here in Washington that in a coherent energy policy, Venezuela should be the single biggest ally of the US. "Yes, but what about the Miami vote?" was the response. Short term political imperatives govern long term policy sense.

Figure 8:



Source: DB

Equally, **now that the remaining oil is in less friendly places, the response when prices are very high are not as might be expected. $70 oil *reduces* the international opportunity set**. At $70 oil the opportunity set for major US oil companies is reduced, because countries such as Venezuela, Saudi Arabia, and Russia are made powerful by oil dollars with strong finances and no need for international oil capital. In fact the response to $70 oil tends to be to increase taxes and keep the majority of opportunities for the state company. The best recent example of this was Russia's major increase in oil production taxes and nationalization of Yukos as ExxonMobil was attempting to buy it. The major opportunities in Venezuela, Kazakhstan, and Nigeria came when oil prices were low, when host governments were critically short of money, and foreign oil company investment was desperately needed. In the current price environment, US foreign oil companies find less opportunities and higher tax.

Additionally, the host governments manage the oil system themselves rather than leave it to a more efficient foreign oil company. The net effect is that at high oil prices less competent management takes over and produces less, not more oil. Furthermore it is fundamentally in a government's interest to produce less oil for more money, to conserve its long term resource, rather than more oil for today's price even if is less, which is how a company will behave, to maximize current revenue and returns. So there is less production from state governments at high prices.

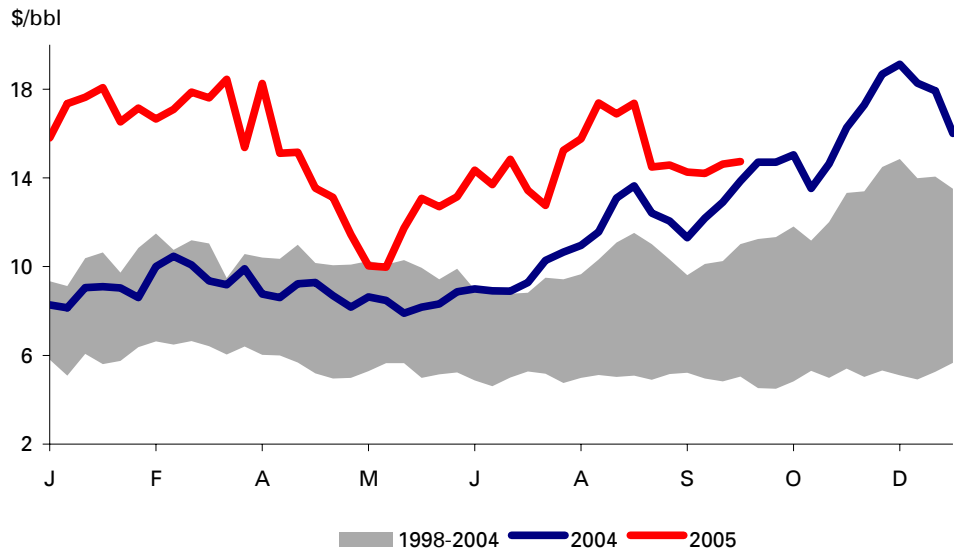
Finally, as host governments close up, the companies are forced to move to where the remaining opportunities are, and they begin to compete against each other, therefore raising costs. The major remaining huge, attractive opportunities are in deepwater, LNG, Canadian heavy oil, and Qatar. Every major oil company is now aggressively pursuing this remaining opportunity set and effectively raising costs by tightening labor costs, raw material costs, acquisition costs and bidding aggressively to win business. Obviously higher upstream oil costs feed through to consumers.

From a US refining investment standpoint, this lack of international opportunities means that crude supply is tight and we are moving to the final barrels available globally. That has widened the spread of price between a light sweet crude such as US domestic West Texas Intermediate, and a heavy sour crude such as Mexico's Maya. ***This has greatly improved***

profitability for those sophisticated refiners who have invested in capability to upgrade heavy crudes (which are relatively much cheaper) into light products.

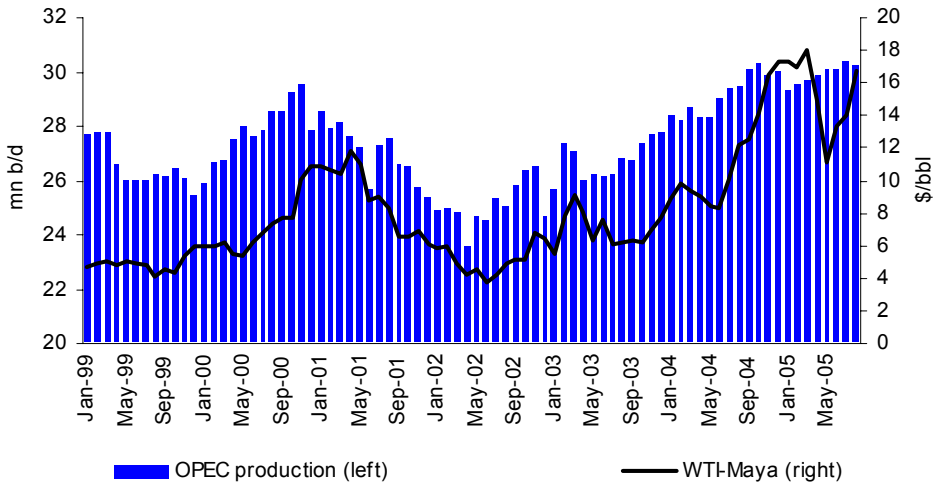
Almost all US refiners are currently undertaking investments or considering investments to take advantage of this differential. ***It is the key tightness of oil markets that leads the Saudis to claim that there is plenty of crude available but no takers. The barrels the Saudis are making available are heavy sourer barrels for which there is currently insufficient spare capacity to process in the US.*** The US refining industry is now undertaking almost as much investment as is physically possible to meet this market opportunity. There is certainly little capacity to do more.

Figure 9: Spread between heavy and light crudes 1998-2005



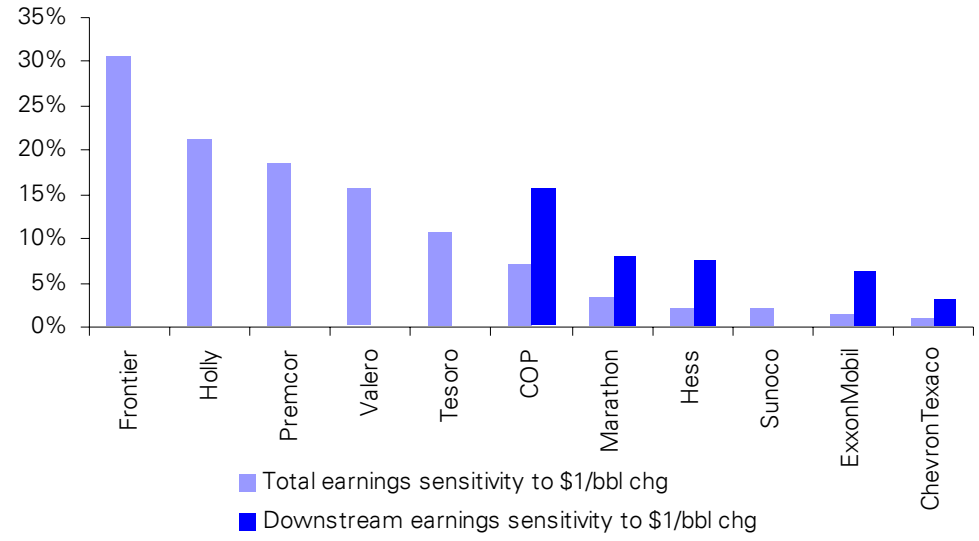
Source: Bloomberg

Figure 10: As OPEC production rises, so the differential light/heavy gets wider



Source: DOE, OPEC, Bloomberg

Figure 11: As the light heavy widens, sophisticated refiners make more money



Source: DB estimates

Oil supply and demand is met by imports from risky places…

Further to our view of global oil supply, the global concentration of oil supply into less friendly places is the answer to the question of "how well is the U.S. positioned to compete for crude oil and refined petroleum products in comparison to other global market participants?", we would say "probably worse", because you are now heavily dependent on countries that are not necessarily your friends. European and Japanese consumers were more import dependent during the 1970s and moved away from imported oil. The US is still in the import ascendancy, and reliant on countries where geopolitical relations are poor.

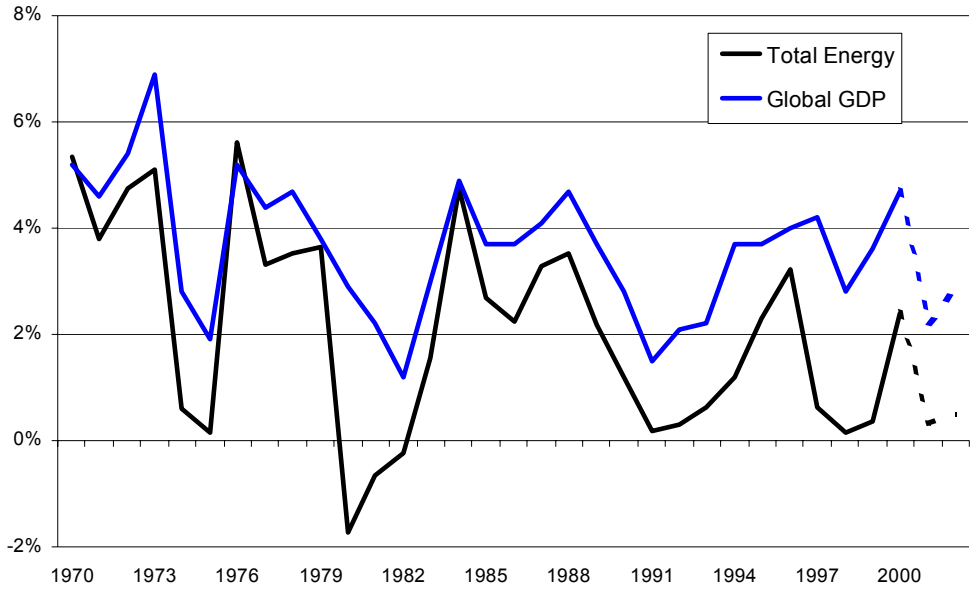
Besides Venezuela, the most vivid example of this is the rise to power as President of Iran one of the leaders of the 1979 US Embassy siege, who has already raised the specter of oil as a weapon in response to pressure over nuclear development. Keep in mind that the oil in Iraq is essentially also now Iranian-, specifically Shia-, controlled.

Another recent example in reference to reliance on import of refined products is the problems of a lack of control of those sources. Specifically of the French, the biggest source of US gasoline from Europe, have recently suffered both port and refinery strikes (and continue to do so).

What will the economic impact be?

Given that on the supply side we are in an environment where high oil prices are feeding higher oil prices, as governments are empowered to act against you. Because of the lack of opportunity and supply response, we now look to the demand side to soften or even fall to resolve the problem. Hopefully that will be as a result of slightly less demand and slightly more supply, but the futures market is now pricing $60+ oil for the foreseeable future, which implies future problems. Energy demand is correlated to GDP, so that the implication is that without a supply response, which we are not getting, we are looking for a recession to force lower oil prices by cutting demand, and we will continue to see higher energy prices until we get one.

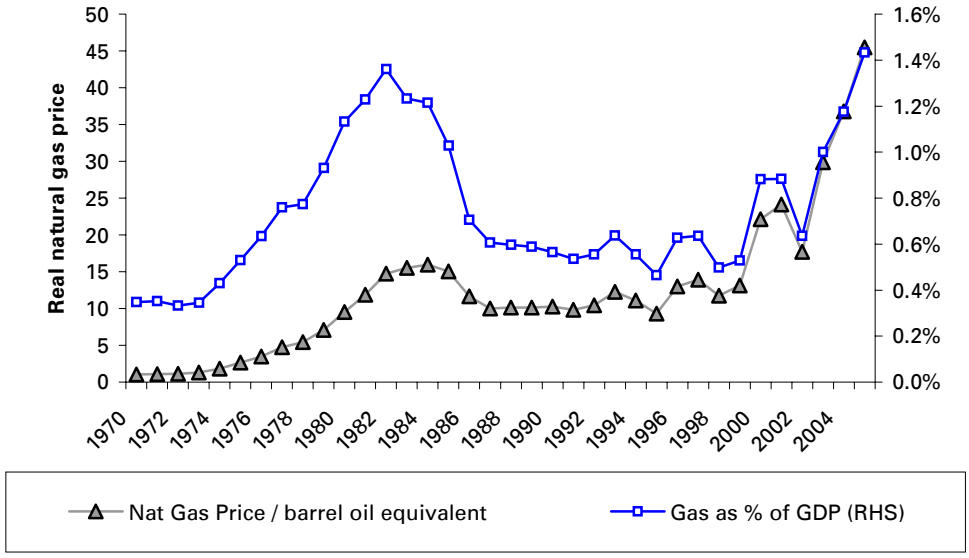
Figure 12: Global GDP vs energy demand



Source: DOE, World Bank

One major economic problem area is natural gas, which fits the theme of the secular shift between cheap oil 20th century to expensive oil 21st century perfectly. The major substitution of global energy in the 1970s and early 1980s was into abundant natural gas. Now, natural gas has become the most scarce part of the US energy equation. We are moving to quite unprecedented natural gas prices in this country, having hit $14 per mmbtu on the NYMEX we effectively hit the celebrated $100 per barrel (of oil equivalent). In natural gas, we at DB characterize the situation right now to be a full scale emergency. Why? Because in oil, you have the strategic petroleum reserve, the IEA, and the overall ability to import more supply. In natgas, there is no SPR, there is no IEA, and there is currently a global shortage of LNG which is not available to import. This country uses around 20 mb/d of oil and around 10 mb/d (oil equivalent) of natural gas, and we are headed towards winter.

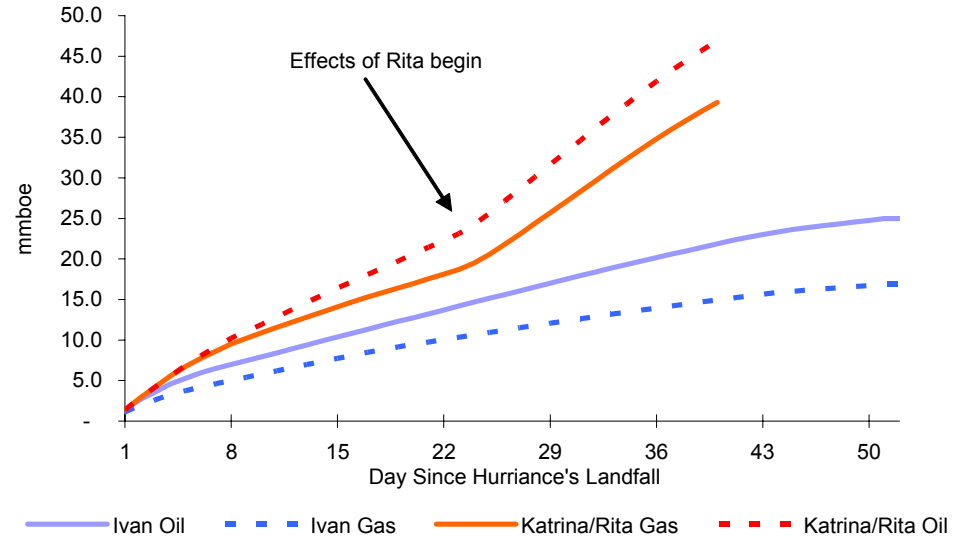
Figure 13: Natural gas in GDP moves to unprecedented levels



Source: EIA, BLS

The economic impact has been severe, with force majeure declared at the natural gas market clearing point of Henry Hub, and many industrial facilities shut by 8 BCF/D of lost production in a 60 BCF/D market. The natural gas impact on refining is also considerable. Not only is natural gas an input fuel, which raises costs, but also natural gas competes with distillate, an oil product. When there is no natural gas at cheap prices, the market moves to consume distillate, which raises oil prices and refining margins. Again, this highlights that the problems in US energy are multi-faceted.

Figure 14: Hurricanes destroy Katrina and Rita US oil supply



Source:

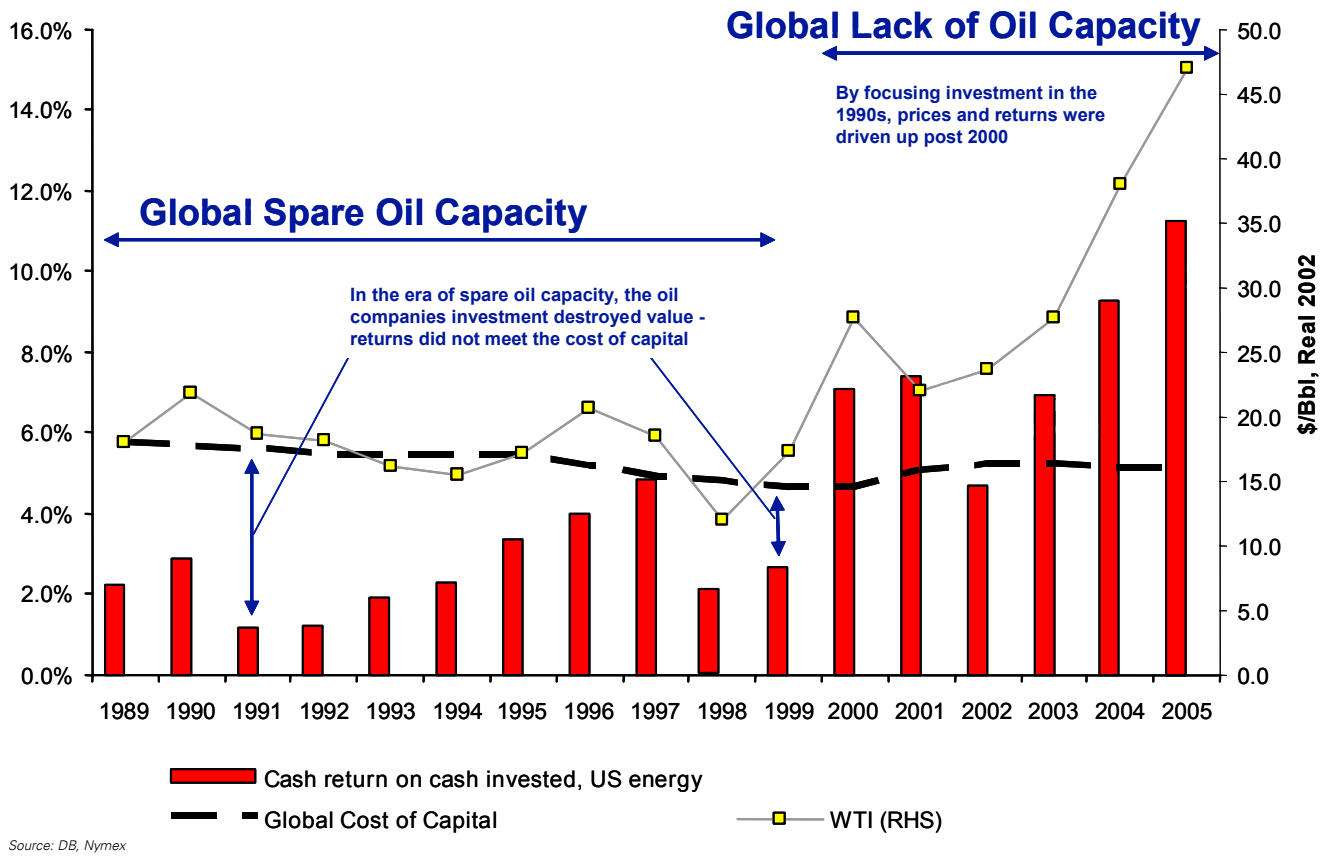
It is important that during the recent huge spike in gasoline prices as a result of hurricanes, the major oils DID NOT pass through the full cost of gasoline to consumers, but rather took losses at the pump in order to reduce the impact on consumers and lessen the potential for government intervention.

When and how will the investment take place?

So why has US refining become so tight in this equation? Again, the answer lies in the long term development of the oil industry this time in the context of the past 30 years. When demand reacted sharply to high oil prices in 1979/80, it did so into an upsurge in investment by oil companies. The last greenfield refinery was built in the US in 1976. Refining capacity was abundant particularly as oil demand began to fall in 1979/80, until **by 1986 the entire world oil industry had 100% spare capacity**. In that year, as the oil price fell from $30/bbl to $10/bbl, OPEC was producing around 11 mb/d of oil, with around 11 mb/d of idle capacity. The world oil tanker business was in crisis, with un-needed tankers parked offshore Athens looking for trade. US refining was at 60% utilization rates, or approximately 100% spare capacity. Four LNG terminals built here in the US were stranded, empty. The oil industry was heavily over-staffed, and an exodus commenced into other industries. Through the 1990s, the oil industry was aggressively consolidated, with a major reduction in staff, for example through the Exxon-Mobil and other mergers.

From 1986 onwards, the world oil business remained in crisis, with around $18 oil, barring a spike in 1990, and a fundamental excess of capacity through to 2000. When looked at in terms of returns against the cost of capital, as illustrated in this chart, we can see that the S&P500 oil companies failed to meet the cost of capital for the entire post-1986 period until 2000. In other words, the companies cost of capital, which was around 6% ex-growth during this period, returned around 4%. This is also known as value destruction. And so the oil industry and particularly US refining became a deeply unpopular place to invest, and the engineers moved to Silicon Valley to generate the tech boom.

Figure 15: Oil investment returns over the past 20 years – suddenly better

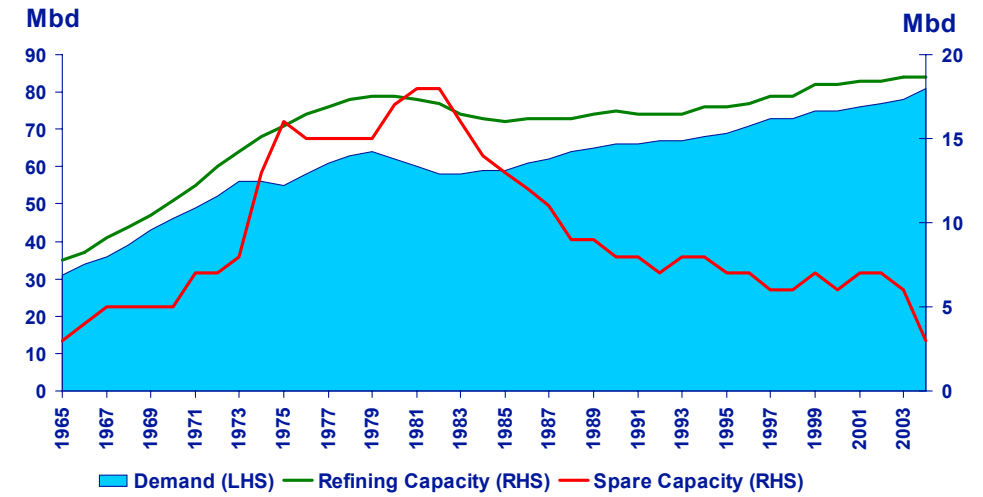


Source: DB, Nymex

In 1991, BP missed its dividend. That was the low point for an industry which from that moment, as illustrated on the chart, began to drive up its returns, by means of investment discipline, cost cutting, and focus on returns. Having had many years of windfall profits in the 1970s and early 1980s, the industry had become fat. At this time excess capacity in the global oil industry, including US refining, was gradually driven out, as the market starved capital from these unprofitable businesses. As illustrated on the chart, during the 1990s, although the real oil price was falling, real returns in the industry were being driven up, and almost made the cost of capital in 1997. However the Asian demand crisis caused two further bad years for the industry, until a combination of global GDP growth and tighter capacity allowed for $30+ oil in 2000/2001 and strong refining margins.

The demand shock post 9-11 once again destroyed earnings power, and the refiners had a very poor year in late 2002 through 2003. However in reality the industry had fundamentally tightened all elements of the energy chain, so that in 2004, which saw the strongest year for global GDP growth since 1976, or since the prior cycle, suddenly all elements of the energy chain, having been rationalized over the previous 20 years, were tight, and prices began to rise rapidly.

Figure 16: Global refining spare capacity



Source: Wood Mackenzie

This driving out of spare capacity and prioritization of returns has massively reduced the potential of the global oil industry to react to the current tightness in markets. A key point is that staff and expertise are not available to add capacity as fast as needed. In areas where capacity can easily be added, such as oil tankers and US LNG regasification, it is being added extremely quickly. Equally US refiners are moving rapidly to address the opportunity set as best they can. Government intervention in US refining investment is likely to compete negatively through the "crowding out" effect of government investment discouraging private investment.

At this stage, there are no major plans for greenfield refining capacity additions, partly because of permitting difficultly, partly because **it is far cheaper to add capacity at existing sites** (around $10,000 per barrel vs. $15,000 for a greenfield refinery). partly from a shortage of labour and expertise, as a function of the tightening of excess capacity over the past 20 years. We do not expect greenfield refinery additions to impact the market within the next four years.

What could go right/wrong?

The biggest fear of the refining bull is sudden demand destruction which has the effect of adding spare capacity rapidly. Examples of a potential shock would be another terrorist event that reduces aviation, Avian flu, which in the shape of SARS dramatically reduced Chinese and Asian oil demand for one quarter in 2003, or a major financial crisis or even depression bought on by a collapse in the property bubble. Why would oil play into this? Because as the US imports more and more oil, especially for use inefficiently such as in excessively heavy SUVs, the current account deficit of imports over exports is widened, this weakens the dollar, and causes oil prices to be higher in dollar terms, which leads more dollars to be spent on oil, so perpetuating the cycle. Again, the response should be in lower demand, but so far that is not happening to the extent necessary.

What does the market think?

The best investors on Wall St call the trend ahead of its development, and sell into its realization. A key sign that the top has been reached is when the government begins to get involved. Historically, the government is extremely quick to intervene because of the industry's deep history of monopolistic behavior (we are thinking here of Standard Oil around 100 years ago), and there remains a deep suspicion of high profits in oil and gas. However this is now one of the most tightly regulated and examined industries globally.

This combination is noxious to investors. A cyclical industry that has years of low profits alleviated by boom years that immediately attract government intervention, with a tough environmental backdrop is not an attractive recipe.

This may be the top for US refining, however the market is already pricing this. US refining stocks have some of the lowest multiples of any equity investments. Where as the overall market trades on a price to earnings multiple of around 18x, Valero Energy, the largest US refiner, is currently forecast by us at DB to make over $15 in earnings next year, and is currently trading right around $100 per share, giving an forward P/E of just 6.7x. This tells us that the market is fundamentally negative on the long term prospects for sustained excess profitability in this industry, firstly because of the likelihood of over-investment if the market is allowed to work its course, and secondly because of the prospect of government intervention if excess profits are recorded. A stock analyst being asked to address a forum such as this in Washington only confirms the market's worst fear that the industry will remain subject to government intervention at times of high profits, and only left alone when times are bad. Hence the low multiples.

Appendix 1

Important Disclosures

Additional information available upon request

Disclosure checklist			
Company	**Ticker**	**Recent price**	**Disclosure**
ExxonMobil	XOM.N	58.64 (USD) 13 Oct 05	6,7,8,13,14,15
Chevron	CVX.N	59.48 (USD) 13 Oct 05	6,7,8,13,14,15,17
Valero Energy	VLO.N	101.27 (USD) 13 Oct 05	6,8,13,15,17

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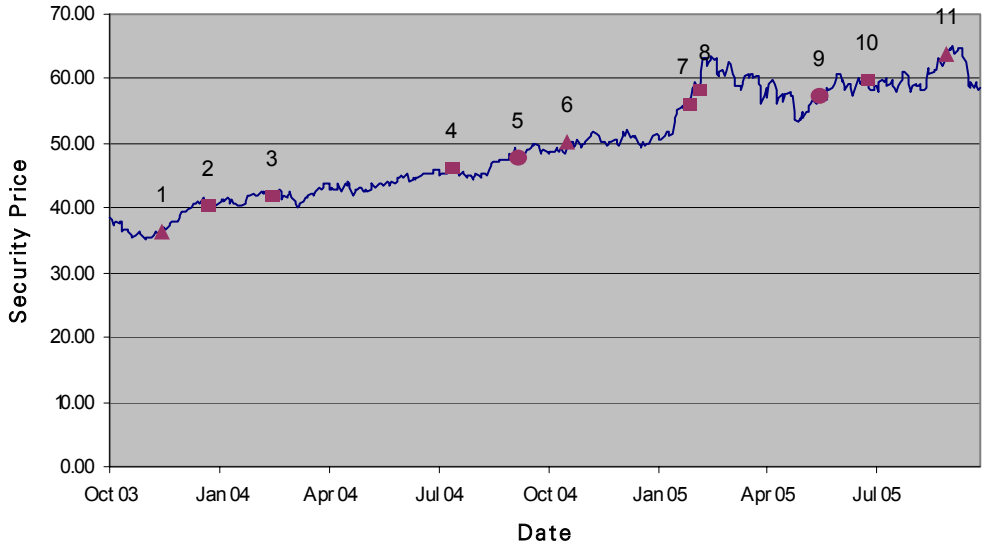
Historical recommendations and target price: ExxonMobil (XOM.N)

(as of 10/14/2005)



Previous Recommendations

Strong Buy
Buy
Market Perform
Underperform
Not Rated
Suspended Rating

Current Recommendations

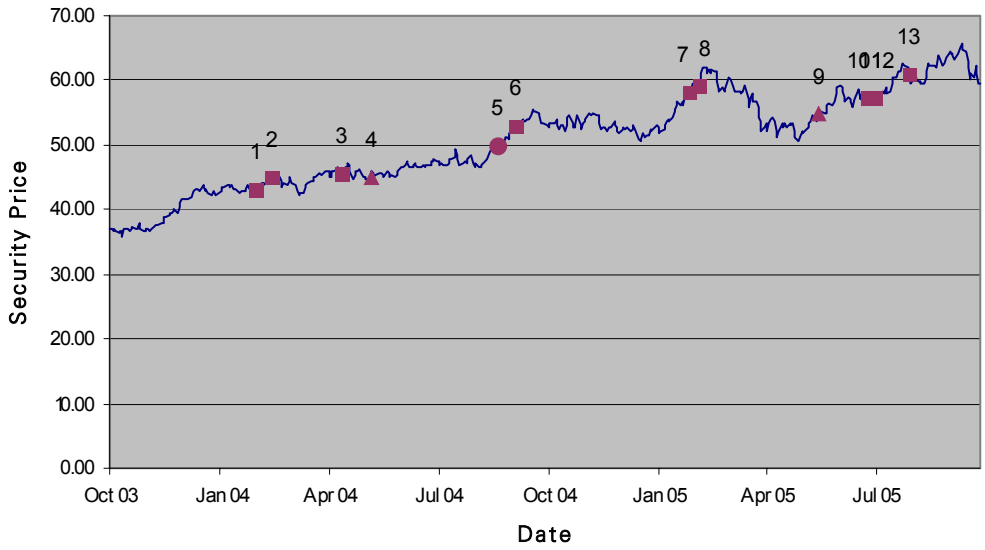
Buy
Hold
Sell
Not Rated
Suspended Rating

*New Recommendation Structure as of September 9, 2002

1. 12/1/2003: Upgrade to Buy
2. 1/9/2004: Buy, Target Price Change USD44.00
3. 3/3/2004: Buy, Target Price Change USD46.00
4. 7/30/2004: Buy, Target Price Change USD51.00
5. 9/23/2004: Downgrade to Hold, USD51.00
6. 11/4/2004: Upgrade to Buy, Target Price Change USD55.00
7. 2/13/2005: Buy, Target Price Change USD60.00
8. 2/22/2005: Buy, Target Price Change USD67.00
9. 6/2/2005: Downgrade to Hold, Target Price Change USD62.00
10. 7/11/2005: Hold, Target Price Change USD69.00
11. 9/16/2005: Upgrade to Buy, Target Price Change USD75.00

Historical recommendations and target price: Chevron (CVX.N)

(as of 10/14/2005)



Previous Recommendations

Strong Buy
Buy
Market Perform
Underperform
Not Rated
Suspended Rating

Current Recommendations

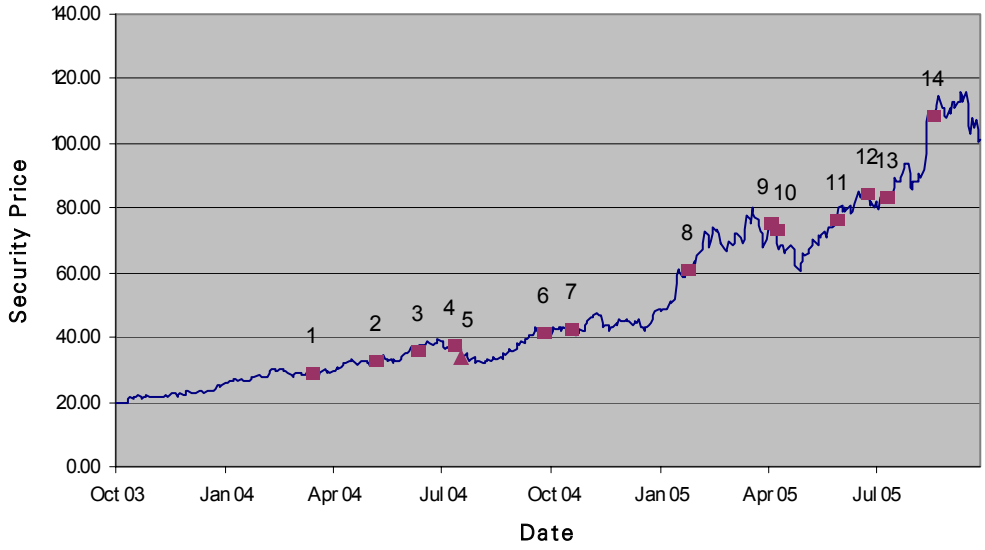
Buy
Hold
Sell
Not Rated
Suspended Rating

*New Recommendation Structure as of September 9, 2002

1. 2/18/2004: Hold, Target Price Change USD75.00
2. 3/3/2004: Hold, Target Price Change USD85.00
3. 4/30/2004: Hold, Target Price Change USD90.00
4. 5/24/2004: Upgrade to Buy, Target Price Change USD99.00
5. 9/7/2004: Downgrade to Hold, USD99.00
6. 9/22/2004: Hold, Target Price Change USD50.00
7. 2/13/2005: Hold, Target Price Change USD55.00
8. 2/22/2005: Hold, Target Price Change USD65.00
9. 6/2/2005: Upgrade to Buy, Target Price Change USD67.00
10. 7/12/2005: Buy, Target Price Change USD70.00
11. 7/13/2005: Buy, Target Price Change USD72.00
12. 7/19/2005: Buy, Target Price Change USD70.00
13. 8/16/2005: Buy, Target Price Change USD75.00

Historical recommendations and target price: Valero Energy (VLO.N)

(as of 10/14/2005)



Previous Recommendations

Strong Buy
Buy
Market Perform
Underperform
Not Rated
Suspended Rating

Current Recommendations

Buy
Hold
Sell
Not Rated
Suspended Rating

*New Recommendation Structure as of September 9, 2002

1. 4/1/2004: Hold, Target Price Change USD63.00
2. 5/24/2004: Hold, Target Price Change USD67.70
3. 6/28/2004: Hold, Target Price Change USD75.00
4. 7/29/2004: Hold, Target Price Change USD80.00
5. 8/5/2004: Upgrade to Buy, USD80.00
6. 10/12/2004: Buy, Target Price Change USD48.00
7. 11/4/2004: Buy, Target Price Change USD49.00
8. 2/10/2005: Buy, Target Price Change USD72.00
9. 4/22/2005: Buy, Target Price Change USD82.00
10. 4/26/2005: Buy, Target Price Change USD86.00
11. 6/16/2005: Buy, Target Price Change USD88.00
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Hold: Total return expected to be between 10% to –10% over a 12-month period

Sell: Total return expected to depreciate 10% or more over a 12-month period

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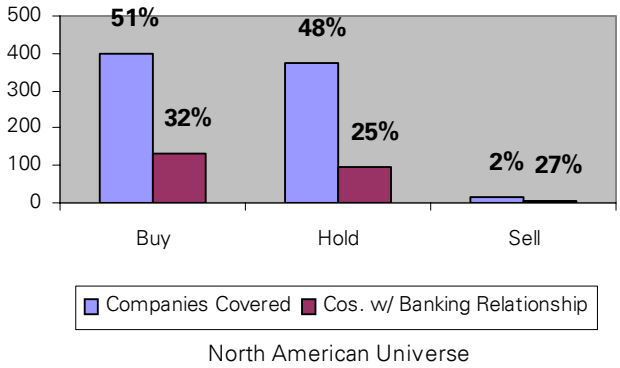
Equity rating dispersion and banking relationships



North American Universe

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